Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1.-6. (Cancelled)

7. (Original) A method for producing a semiconductor laser device comprising the steps of:

forming a semiconductor multilayer structure on a semiconductor substrate of a first conductivity type, the semiconductor multilayer structure including: a cladding layer of the first conductivity type; an active layer having a super-lattice structure; a first cladding layer of a second conductivity type; an etching stop layer of the second conductivity type; a second cladding layer of the second conductivity type; a band graded layer of the second conductivity type; and an impurity supply control layer;

disordering the active layer by diffusing an impurity at least in a predetermined region within the semiconductor multilayer structure; and

patterning the second cladding layer into a ridge structure by wet etching,

wherein a concentration of the impurity diffused in the etching stop layer within the predetermined region is greater than a concentration of the impurity outside the predetermined region and equal to or smaller than about 2×10^{18} cm^{-3}.

8. (Original) A method according to claim 7,

wherein the semiconductor substrate comprises a compound semiconductor material containing GaAs of the first conductivity type as a main component;

the cladding layer of the first conductivity type comprises a compound semiconductor material containing GaP of the first conductivity type as a main component;

the active layer comprises a compound semiconductor material containing GaP as a main component;

the first cladding layer, the etching stop layer, the second cladding layer, and the band graded layer each comprise a compound semiconductor material containing GaP of the second conductivity type as a main component; and

the impurity supply control layer comprises a compound semiconductor material containing GaAs as a main component.

9. (Original) A method according to claim 7,

wherein the semiconductor substrate comprises GaAs of the first conductivity type;

the cladding layer of the first conductivity type comprises AlGaInP of the first conductivity type;

the active layer includes a super-lattice structure comprising AlGaInP and GaInP;

the first cladding layer and the second cladding layer each comprise AlGaInP of the second conductivity type;

the etching stop layer comprises GaInP of the second conductivity type;

the band graded layer comprises GaInP of the second conductivity type; and

the impurity supply control layer comprises GaAs.

10. (Original) A method according to claim 7, wherein the impurity supply control layer has a thickness equal to or greater than about 100 Å.

11. (Original) A method according to claim 7,

wherein a concentration gradient of the impurity diffused in the second cladding layer within the predetermined region, taken along a normal direction to the substrate from an upper face toward a bottom face of the substrate, is greater than a concentration gradient of the impurity outside the predetermined region along the normal direction to the substrate, and is equal to or smaller than about 2×10^{18} cm^{-3} μm^{-1}.

12. (Original) A method according to claim 7, wherein a concentration of the impurity diffused in the active layer within the predetermined region is greater than a concentration of the impurity outside the predetermined region, and is equal to or smaller than about 2×10^{18} cm^{-3}.

13. (Original) A method according to claim 8, wherein the impurity is Zn.

Respectfully submitted,

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